Abstract for HIPPARCOS Venice '97

% Title [e.g. The Distance of the Large Magellanic Cloud] :
A Search for Stars Passing Close to the Sun

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% Abstract (please provide 10-20 lines of text, but not more than 250 words):
We have combined HIPPARCOS proper motion and parallax data for nearby stars with ground-based radial velocity measurements to find stars which may have passed (or will pass) close enough to the Sun to disrupt the Oort cloud. Such close encounters could deflect large numbers of comets into the inner solar system, with possibly serious consequences for biological evolution. Only one star (Gliese 710) is found with a predicted closest distance of less than 0.5 parsec, although several stars come within about 1 parsec during a +/- 8.5 Myr interval. In most cases the uncertainty in closest approach distance is dominated either by uncertainties in published radial velocity measurements or by uncertainties in the barycentric motion of binary systems. We have started a program to obtain new radial velocities for stars in our sample with no previously published values.

% Session (first choice / second choice) [e.g. 8/7] :

% Preferred presentation (oral / poster) [e.g. poster] :
Poster